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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,059	04/15/2004	Toshiyuki Takabayashi	04232/HG	9475

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EXAMINER

BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,059

Applicant(s)

TAKABAYASHI ET AL.

Examiner

Susan W. Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-16 and 26-31 is/are pending in the application.
4a) Of the above claim(s) 12-16 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 4-11 and 26-31 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 04 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

Election/Restrictions

Applicant's election of Group I, claims 1-11, in the reply filed on 9-14-2006 is acknowledged. New claims 26-31 are joined with the elected claims. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 12-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 09-14-2006. Rejoinder will be considered upon identification of allowable subject matter in the elected claims.

Response to Amendment

The rejection of claims 4, 5 and 10 under 35 U.S.C. 112, second paragraph, is withdrawn.

The rejection of claims 4, 8 (now 28) and 10 (now 30) under 35 U.S.C. 102(e) as being anticipated by Crivello [US 2005/0064333, having an effective filing date of May 16,2002] is withdrawn. Applicant's amended claim 4 does not recite any of the sulfonium salts taught by Crivello.

The rejection of claims 6-11 as being unpatentable over J 2002-188025 (Abstract) in view of Crivello [US 2005/0064333] is withdrawn for the reasons given above.

The rejection of claims 4, 8 and 10 under 35 U.S.C. 102(e) as being anticipated by Nakayashiki et al in PrePublication US 2006/0055088, filed 09-25-2003 is withdrawn. The aromatic sulfonium salt of formula (1) set forth in the Abstract disclosed by Nakayashiki et al is not included in the instantly claimed sulfonium salts.

Response to Arguments

Applicant's arguments filed 09-14-2006 have been fully considered but they are not persuasive.

Applicant argues that JP 2002-241474 does not disclose the compounds in the amended claims. This argument is not persuasive. Species of formula (1) disclosed by J '474 correspond to species of formula (1) in instant claim 4 and formula (7) in claim 5. For example, J '474 discloses sulfonium salts wherein each of "X" can be alkyl and one or more of R₁ to R₅ can be 2-methoxyethyl or 2-ethoxyethyl, the instantly claimed species wherein at least one of R₁, R₂ or R₃ is alkoxy is disclosed. When both "X" are methyl and one of the R is methyl and the others hydrogen, the instantly claimed species wherein R₁, R₂ and R₃ are each methyl is disclosed. This species is formula (7) in claim 5.

With respect to the rejection of claims over JP '025 in view of JP '474, the comparative data in the instant specification has been considered and has been found unpersuasive of unexpected results. The comparative data fails to show that selection of the sulfonium salts disclosed by J '474 and included in the instant claims provides unexpected results. The comparative examples in the specification all contain a triphenylsulfonium salt. Table 12 discloses UVI-6990 as the comparative sulfonium salt, which is the same sulfonium salt as used by J '025. The data shows that the instantly claimed sulfonium salts result in no benzene detected while the amount of benzene detected in the comparative examples is significantly more. However, there are no examples according to the invention wherein a sulfonium salt taught by J '474 is employed, so it is not clear whether these salts provide unexpected results. Furthermore, J

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'474 teaches that the disclosed sulfonium salts provide an onium salt wherein no benzene is produced from the initiator. It is noted that J '474 discloses only a few species of the sulfonium salts set forth in the instant claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4, 5, 8, 10, 28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2002-241474 (as disclosed in the translation submitted 12-22-2005). J'474 discloses and claims a sulfonium salt of formula (1) wherein all benzene rings are directly bonded to carbon in substituents to improve solubility and provide an onium salt wherein no benzene is produced from the initiator (page 1 and page 5). The disclosed cationically polymerizable compositions can comprise a compound containing an oxetane ring (page 8). Species of formula (1) disclosed by J '474 correspond to species of formula (1) in instant claim 4 and formula (7) in claim 5. For example, J '474 discloses sulfonium salts wherein each of "X" can be alkyl and one or more of R₁ to R₅ can be 2-methoxyethyl or 2-ethoxyethyl, the instantly claimed species wherein at least one of R₁, R₂ or R₃ is alkoxy is disclosed. When both "X" are methyl and one of the R is methyl and the others hydrogen, the instantly claimed species wherein R₁, R₂ and R₃ are each methyl is disclosed. This species is formula (7) in claim 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-11 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over J 2002-188025 (Abstract) in view of JP 2002-241474 (as disclosed in the translation submitted 12-22-2005). J '025 discloses low viscosity ink jet ink compositions comprising a cationic photoinitiator and oxetane, epoxy and vinyl ether compounds in weight percents overlapping those set forth in instant claim 9. J'474 discloses and claims a sulfonium salt of formula (1) wherein all benzene rings are directly bonded to carbon in substituents to improve solubility and provide an onium salt wherein no benzene is produced from the initiator (page 1 and page 5).

It would have been obvious to one skilled in the art at the time of the invention to employ the sulfonium salt cationic initiator taught by J '474 as the cationic photoinitiator in the ink jet ink compositions disclosed by J '025. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of taking advantage of the teaching that the sulfonium salts taught by J '474 have improved solubility and do not produce benzene when activated. With respect to claim 5, the compound of formula (7) is a species of the sulfonium salt compound disclosed by J '474 wherein all substituents are an alkyl group and the alkyl group is methyl. With respect to claims 6 and 7, J '474 teaches suitable additives on page 10, second paragraph; thus, it would have been obvious to one skilled in the art at the time of the invention

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to add one or both of the additives set forth in instant claims 6 and 7. With respect to claim 9, It would have been obvious to one skilled in the art at the time of the invention to employ a mixture of such compounds and to determine the required weight % of each to provide the desired properties, such as viscosity, because J '025 teaches ink jet inks comprising a mixture of oxetane, epoxy and vinyl ether compounds in weight percents overlapping those set forth in claim 9. With respect to claim 11, It would have been obvious to one skilled in the art at the time of the invention to adjust the weight percents of components in the compositions taught by J '025 to provide the recited viscosity because J '025 teaches that the disclosed compositions are useful as ink jet ink compositions having low viscosity.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB
11/26/06


Susan W Berman
Primary Examiner
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